Establishing a Multidisciplinary Human Resources Development Institute Under Public-Private Partnerships

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Abstract

After the globalization of the Indian economy in 1991, many multinational companies established state-of-the-art design and manufacturing operations in India. This gave rise to an acute need for upgrading the products of existing Indian companies. Initially, many engineering colleges offered training and development programs based on the vacant slots and the availability of well-accomplished senior faculty members. When the market competition increased, the companies couldn't find sufficient institutes to offer the needed training programs. Many countries have implemented a model called Public-Private Partnerships to establish institutes to undertake the training of engineers, manufacture goods, and offer services. This PPP model has been further explored and developed to offer needed training and development programs for the executives of companies in the industrial corridors and hubs. It is suggested to register this institute under the Societies Act 1860, and a Board of Governors has to be constituted. The stakeholders are the state and central governments, companies, higher education institutes, national research laboratories, private training companies, and NGOs. The advantages of the PPP model have been listed. The institute has to develop a business model for planning and collecting fees from the companies. The success of the model is based on the collaboration of all stakeholders.

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1. Introduction

India globalized its economy in 1991. Due to this, foreign direct investors established state-of-the-art manufacturing companies in India. Many utilized the talents of engineering graduates and started product developments in their Indian design offices. Due to this competition, many existing Indian companies had to modernize their production methods to compete with the newly established foreign companies. These Indian companies had to improve their products, which gave rise to many challenges to the competencies of their executives and employees. They identified many existing engineering institutions to train their executives and offer solutions for improving the analysis, design, prototype development, testing, and choosing the best manufacturing methods. However, these engineering institutes could not offer much product-specific training to the executives. Most of the companies could not improve their products and ensure quality, reduce costs, and supply as per the schedule. Many universities focused on these issues and came up with a Public-Private Partnership model for manufacturing and training executives and employees. Many fast-developing countries like the Republic of Korea, Japan, Singapore, and Malaysia have utilized this Public-Private Partnership model for manufacturing. This model could be used to train the executives and employees of many companies in the industrial corridors and hubs. Hence, this research study centers around planning a Multidisciplinary Human Resource Development Institute under a Public-Private Partnership.

2. Literature Survey

Thanikachalam.V. (2023) identified the following ten methods of corporate training and development: 1. Corporate Universities (CU), 2. Long-term Collaboration with Institutes of National Importance and Professional Universities, 3. Cooperative Programs with various universities, 4. Establishing Industry-Specific Postgraduate Programs, 5. Establishing Regional Training Centers, 6. Establishing In-House Training Centers, 7. Utilizing Long-term Programs of the Professional Universities, 8. Utilizing Online Executive Development Programs, 9. Utilizing Private Training Organizations, and 10. Scaffolding Self-Directed Learning of the Employees. However, there are many shortcomings in these methods. Most of these methods don’t cover the full needs of corporate executives. Most of the companies are affected by disruptive technologies, and they have to update their products and marketing methods. Many business outlets failed when they continued sales through shops that were established in the shopping malls. Consumers switched to online shopping.

Many camera makers didn't update their products to digital technology and lost the market. Many companies that sold airline tickets without considering online booking using credit cards lost the market. Many local taxi services lost the market due to aggressive online booking through Uber, Ola, and other companies that utilized online booking. Many training programs offered by various engineering institutes were fully utilized [David Gann et al. 2022, Ethan Schrum, Kluczny Shanan, 2022, Nagoya University, 2010, National Institutes of Technical Teacher Training Institutes (NITTTRs), 1964, Patti Williams and Gad 2021, Shanan Kluczny, 2022, UNIDO, 2022, Vector Solutions, 2020].

A few Corporate Universities managed to offer desired executive development programs [Chiradeep Basu Malic, 2021, David Genn et al, 2021, ELN Learning, 2022, Jack Phillips, 2004, Kluczny Shanan, 2022, Len Musie and Meighan, 2019, Patti, et al. 2022, Rahul Singh, 2018, Toyota, 1981].

Rigid corporate universities failed to meet the needs of executives to update manufacturing methods to meet the challenges of disruptive technologies [David Schultz, 2020, David Sessions, 2020, Marc, et al. 2023, Marnie Kunz, 2017, Mohan Sawhney, 2021].

Akilo Sakamoto focused on demand-based skills development through public-private partnerships [ILO,2022]. Daralus et al. reviewed public-private partnerships for workforce development. Debra Lam (2023) assessed the essential role of public-private partnerships. The Educational Training Foundation suggested that vocational education can be improved through public-private partnerships. Georgetown University (2023) offers a course on public-private partnerships. The Harvard Kennedy School (2023) offers a course on public-private partnerships for infrastructure development. Isabel (2017) checked the development of effective public-private partnerships. Kasia Lundy and Haren Ladd (2022) identified reasons for institutions struggling to provide quality education and suggested adopting public-private partnerships. Nadir, et al. (2023), evaluated the success of public-private partnerships. The Urban Land Institute (2016) developed an in-depth model for a successful private-public partnership from principles to practices. All these researchers focused on public-private partnerships for improving vocational education, urban land planning, infrastructure development, and demand-based skill development. In India, an Indian Institute of Information Technology has been built in Gwalior on a public-private partnership. All these suggest the use of public-private partnerships in training and developing executives of corporations using public-private partnerships.

3. Statement of The Problem

Develop a model for training and developing corporate executives through public-private partnerships so that various manufacturing companies in industrial hubs and corridors can adequately train and develop their employees and executives to analyze, design, develop new prototypes, test them, improve their performance, update the prototypes, plan for cost-effective manufacturing, market the products at a global level, maintain the products, and develop innovative products to meet challenging quality standards.

4. Objectives

1. Review the existing methods of training and developing the employees and executives of the corporates and micro, medium, and small enterprises (MSMEs)
2. Identify the shortcomings in training and developing the employees and executives through the existing practices
3. Develop a model for public-private partnership for establishing and conducting needed training and development programs of large corporates in the industrial hubs and corridors in India

4.1. Research Methodology

Existing institutions that offer selected training and development programs in India

4.1.1. National Skill Training Institute, Chennai

This was established in 1968 under the aegis of Directorate General Training (DGT) by the Ministry of Skill Development and Entrepreneurship, Government of with assistance from the United Nations Development Program (UNDP)/International Labor Organization (ILO) to train technicians, supervisors, faculty members, engineers, and executives of industries. This institute offers customized courses also.

4.1.2.Technical Teachers Training Institutes/National Institutes of Technical Teachers Training and Research (NITTTRRs)

The government of India established four autonomous Technical Teacher Training Institutes in Bhopal, Chandigarh, Chennai, and Kolkata in 1964-65 for developing polytechnic colleges, training the faculty members, evaluating the curricula, developing new curricula, preparing instructional packages, undertaking consultancy projects under various engineering departments, private companies, and offering many diverse and global faculty development programs under various International Development Agencies like Asian Development Bank (ADB), Danish International Development Agency (DANIDA), German International Development Agency (GTZ), Swedish International Development Agency (SIDA), United Nations Development Program (UNDP), United States International Development Agency (USAID), and the World Bank. These institutes have qualified and trained faculty members who offer executive development programs, assist in establishing regional training institutes for various companies, develop training programs, and undertake sponsored research and development programs. The existing institutes that offer executive development programs are presented, and their capacity to undertake a set of turnkey development projects is presented in Table 1.

Table 1. Existing Training Institutes and their Capacities

No.	Training Needs of Companies	Training Organization	Type of Programs Offered	Capacity to undertake Turn-Key Projects
1.	Continuous Training of thousands of Executives of a Multi-National Company which has many manufacturing units in many countries	Corporate University established by the MNC	All types of training and development programs: level courses; Senior Executive courses; face-to-face courses; Online Development Courses;	Confined to its Organization. Engages adjunct professors from global universities; Strong link between Chief Learning Officer (CLO) and Chief Knowledge Officer (CKO); Adequate funding from the parent company; Establishment cost is very high; Linked to various Research and Development Organizations

2.	Executive Training and Development Programs for MSMEs	Technical Universities, NITTTRs, Private Training Organizations	Management courses, Computer-based courses, Financial management courses, Manufacturing methods, Human Resources Development, Total Quality Management, Environmental Protection, Safe Work Practices	Depends on the training institute's policy, Availability of the number of highly qualified trainers, and modern resources. Can't undertake turnkey projects for a company. These institutes have limited high-competent faculty members who are linked to postgraduate and doctoral programs that are offered by the institute. A few adjunct professors could be employed for one additional project if needed. The experts can be employed as short-term consultants. Recently graduated postgraduates and doctorates can be employed
3.	Employee Skill Development Courses	National Skill Development Institutes	These institutes can take up a limited number of trainees.	They can offer a series of training courses based on the available slots.
4.	Pollution Control and Environmental Protection	Technical Universities, NITs, NITTTRs, and State/Central Pollution Control Boards.	Training the trainers. One program at a time. Their training materials can be used for the in-house programs.	These institutes can offer training programs that take up a limited number of investigations and offer company-specific solutions. The head of a laboratory can be trained. One or two deputy managers can be trained through part-time courses.
5.	Energy Management of Continuous Process Industries	IITs, NITs, Technical Universities, and Central Institutes.	Energy management courses for a company.	These institutes can undertake a limited number of company-specific employee development courses per year.
6.	Financial Management, Cost Reduction	Management Departments of State Technical Universities, NITs, & Indian Institutes of Management	Financial management, Planning Programming, Budgeting System, Value Engineering, Lean Management.	Can take up one or two projects in a semester. Can train the managers of a company through planned courses in each semester.
7.	Planning and Conducting In-House Training and Development Courses	NITTTRs, IITs, NITs, State Technical Universities	Training Needs Analysis, Identification of performance gaps, creating outcome-based curriculum, developing training packages, & piloting.	The organizations can train the trainers and get a set of model training courses and training packages. Can employ a set of adjunct professors for a short period. Emeritus professors can undertake a few projects and they can train the trainers
8.	Online courses for their employees	IITs, IIMs, and State Technical Universities.	They offer around 25 to 50 courses.	An unlimited number of participants can be enrolled in selected courses.
9.	Do	EDX, Coursera, etc.	They offer more than 2000 courses in many fields.	An unlimited number of participants can be admitted at a time. Organizations can select and nominate the participants.
10.	Training the executive based on CLO's suggestions	One has to plan a set of separate courses through an in-house department.	To meet the specific needs in analysis-design-prototype development- testing-improving-manufacturing- mass production-marketing-maintenance- scrapping-innovative product development	Should plan a new training and development organization under the Public-Private Partnership. Suitable for new institutes in the industrial hubs and corridors. This research paper provides a model for the P-P-P model in establishing and operating.
11	Cement Industry	Regional Training Centers (RTCs) were established under the World Bank in Gujarat, Madhya Pradesh, Rajasthan, and Tamil Nadu.	Offered needed programs for the employees of the cement companies like Safe Work Practices, Environmental Protection, Welding, Pump Maintenance, Energy Management, Productivity, etc.	NITTTRs assisted these RTCs in planning and conducting needed training programs. These institutes trained the part-time trainers and provided a set of training packages. Later, the progress was limited.

12	In-house Training Centers	Ramco Cement Ltd established an in-house training center.	Plans needed courses for the employees.	Do not invest in research and development programs.

5. Proposed Public-Private Participation for Establishing a Multidisciplinary Human Resources Development Institute

Public-Private Partnerships are focused on creative alliances between central government, state government, large-scale industries, MSMEs, higher education institutes, institutes of national importance, autonomous institutes, private training institutes, national professional associations, state technical universities, national research and development laboratories, national research project funding agencies, entrepreneurs, nonprofit organizations, and other non-government organizations.

Using PPPs to facilitate radical development of Indian industriesthrough trained executives, employees, and skilled workers. They will assist in revising the curricula of engineering programs, creating radical industry-specific graduate and postgraduate programs, and sponsoring industry-specific research and development programs.

The following are India's significant industrial corridors: Delhi- Nazic-Mumbai- Pune-Bangalore- Chennai- Kolkata; Chennai- Salem-Coimbatore- Nanguneri; Chennai-Tiruchirappali- Madurai, Tuticorin; Trivandrum-Ernakulam- Kozhikodu and North East Corridor. Most of the industries are located in these corridors.

They need many up-to-date Corporate Executives for analysis -prototype development - Choosing – a Cost cost-effective manufacturing- marketing- maintenance- and undertaking innovative Design of new Products to meet disruptive technologies.

Need for Public-Private Participation in Establishing a Multidisciplinary Human Resources Development Institute: The fast-growing Indian industries need dedicated fully pledged research and development institutions which are to be supported by the government, industries, and higher education institutes. The proposed institutes will act as Chief Learning Institutes similar to the Chief Learning Officer of a company and focus on global innovations and radical developments. They have to be supported by the Ministry of Industries and the companies in the industrial corridor. The higher education institutes will provide adjunct professors and undertake sponsored projects. The State Governments will provide land under a 99-year lease. The Multidisciplinary HRD institutes could be registered under the Society's Act. A Board of Governors can be established and members can be from the industries, government, and higher education institutes. Research and Development projects can be offered to the higher education institutes. These multidisciplinary institutes can offer needed executive development programs and the cost has to be paid by the user departments.

5.1. Creating a Shared Vision

The vision guiding a PPP in HRD must be subscribed to by key stakeholders, including central and state governments, large-scale industries, MSMEs, higher education institutes, business leaders, private training institutes, NGOs, executives,

and skilled workers. The sponsoring industries and the central and state governments should have a common vision.

5.2. Mission

The PPP in HRD must develop various training and development programs based on the letters of invitation or should develop technical and financial proposals based on the advertisement. Could develop a list of experts who can provide expert service for a specific project. Should construct seminar halls, conference halls, classrooms, studios, computer centers, libraries, board rooms, quarters, hostels, guest houses, dining halls, and transport facilities.

5.3. Memorandum of Understanding of the Board of Governors

1. Identify specific roles of state government, central government, industries, and higher education institutes.
2. Create a shared vision
3. Allocate responsibilities to all stakeholders
4. Identify the risks and rewards for all stakeholders
5. Establish a clear and rational decision-making process by the Board of Governors
6. Make sure all stakeholders undertake needed responsibilities
7. Ensure consistent and coordinated leadership
8. Communicate all agendas, minutes of the Board, and resolutions in a transparent way.
9. Plan to implement the resolutions effectively and efficiently
10. Build trust as a core value.

5.4. Responsibility of all Stakeholders

1. Supporting the institute through grants-in-aid and fees for research and development projects
2. Establishing specific problem-based units
3. Building adequate infrastructure
4. Ergonomically designed conference halls, workshops, laboratories, and extension units
5. Enhancing competitiveness and sustainability
6. Providing radical solutions and development processes for radical growth of industries in the corridor
7. Providing modern instruments, resources, technical support staff, well-qualified research and development engineers, human resource developers, and managers
8. Share the problems that need in-depth investigation and research
9. Undertaking research and development projects from medium, small, and micro enterprises (MSMEs)
10. Creating opportunities to undertake dissertations/projects by the higher education institutes
11. Stimulating innovations in product development
12. Creating opportunities for the growth of MSMEs
13. Protecting the intellectual properties developed and licensing them to user companies based on the royalties

14. Collecting the innovations from global industries and their applicability in Indian companies
15. Creating active linkages with higher education institutes for training executives
16. Developing online programs
17. Collecting case studies on industrial failures and innovations
18. Linking research and development by sponsoring projects that are needed by Indian companies
19. Linking global companies for manufacturing the new products that are created in India
20. Incorporating principles of resilient, sustainable, and healthy collaboration between industries and higher education institutes
21. Improving access to national research and development laboratories
22. Reducing carbon emissions
23. Fostering global economic competitiveness
24. Improving high-quality multidisciplinary engineering education, management, natural resources
25. Linking manufacturing to export

5.5. Potential Benefits of PPP in Human Resources Development

1. Project risks are analyzed and minimized
2. Adequate savings on training and development
3. More innovative and focused training of the executives
4. More innovative human resource development
5. Substantial return on project investments
6. Optimum use of public funds
7. Quicker access to new technology
8. Continuous development of human resources
9. Improvement of excellence in skills of human resources
10. Active linkages between industries and higher education institutes
11. Training the executives for strategic planning and product exports
12. Standardization of training programs
13. Can assist in-house employee development
14. Can be linked with other PPP institutes
15. Proactive assistance to MSMEs with the challenges of disruptive technologies
16. Can train diverse global executives
17. Can undertake international projects in human resource development
18. Can eliminate the burnout of executives
19. Easy to redevelop industries
20. Can innovate product development
21. Can improve the economy

22. Can improve regional competitiveness
23. Easy to take up turnkey projects in HRD
24. Can create active links with International Development Agencies (IDAs) to offer training to their clients

5.6. Potential Limitations

1. Due to a shortage of multidisciplinary experts
2. Has to manage vulnerability, uncertainty, complexity, and ambiguity
3. Time taken to reach excellence in HRD
4. Dependence on government policies

6. Discussion

Many engineering institutes offer training and development programs based on time slots only. Bigger projects can't be undertaken by them for want of resources and experts. In the last ten years, public-private partnerships have emerged as dedicated institutions for offering vocational education programs, courses in information technology, urban development, etc. Hence, it is essential to explore this model to undertake training and development of executives and employees in various industrial corridors and hubs. There is a need for a policy and commitment to establish a multidisciplinary human resource development institute under a public-private partnership. This institute can link various organizations like higher education institutes, MSMEs, large-scale industries, state and central government, private training institutes, and NGOs. There is a need for a consortium of companies. If a Board of Governors has been established and registered under the Society's Act, it can function well. It can undertake many development activities for the industries in the corridors and hubs. Every year, the PPP has to plan needed courses, and it can include experts from various institutions. They have to review the outcome of the courses conducted and can take remedial measures to improve their performances. They can be very efficient in planning and offering development programs. It is possible only when the government agrees to create a policy and offer needed land, and the industries offer total development from their funds. This PPP model can make quicker decisions and involve various experts for each project. Further, this model will be very efficient and can be sustained on the funds generated through services.

7. Conclusions

The need for training the executives of Indian industries has been recognized by many companies that sought the services of well-performing engineering colleges, but they could not take up all the programs due to limited slots given for training external executives. Most of the colleges have around 40-50% vacancies at the senior level and interdisciplinary research and development skills. Many Western and Far Eastern countries have established Public-Private Partnerships to offer various long-term programs in engineering colleges. Even in urban development, the PPP model has been utilized. Hence, this research assessed this model and suggested a Multidisciplinary Human Resource Development

institute for training the executives of various companies in the industrial corridors and hubs. This model links the state and central governments, companies, engineering institutions, national research and development laboratories, private training organizations, and NGOs. It is suggested to register this institute under the Society's Act 1860 and constitute a Board of Governors to manage the operations. The vision of this institute has to be developed in consultation with the stakeholders. The mission has to be developed to plan needed programs. Also, the state government has to provide needed areas under a 99-year lease. This institute has to develop needed courses and collect fees for implementation from the companies. This model depends on the total collaboration among all stakeholders.

7.1. Limitations of this Study

This study offers a significant approach to establishing an institution under a Public-Private Partnership. Success depends on the total cooperation from all stakeholders, and the vision has to be accepted by all the members.

7.2. Suggestions for Further Study

Further studies can be undertaken only after the pilot study.

About the Author

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References

- Akiko Sakamoto. (2022). Towards Demand-based Skills Development through Public-Private -Partnerships. International Labour Organization. https://www.ey.com/en_us/strategy/public-private-partnerships-in-higher-education
- Chiradeep Basu Malick. 5 Steps to Succeeding with Corporate Universities.https://spicworks.com/hr/learning-development/articles/5-steps-to-succeeding-with-corporate-universities
- Daraius Irani, Michael Siers, Ellen Bast, Mathew Lee. (2029). Public-Private Partnerships for Workforce Development. RESI of Towns University
- David Gann, Fulvia Montresor, and Jaci Eisenberg. 3 ways to nurture collaboration between university and industry.

World Economic Forum.

- David Schultz. The Rise and Coming Demise of the Corporate University. American Association of University Professors. http://aasu.org/article/rise-and-coming-demise-corporate-university#
- David Sessions. (2020). How Business Schools Fail Up. The Rise of the STEM-obsessed, Corporate-partnered University. https://newpublic.com/article/156378/rise_business_schools_corporate_university
- Debra Lam. (2023). The Essential Role of Public-Private-Partnerships in Future Building. Philanthropy New Digest. https://philanthrophynewsdigest.org/features/commentary-and-opinion-the-essential-role-of-public-private-partnerships-in-futures-building
- Education Training Foundation. Centres of Vocational Excellence and Public-Private Partnerships
- ELN Learning. (2022). The Corporate University Shift: Why Great Companies Invest in Custom Learning. https://elmlearning.com/blog/the-corporate-university-shift
- Ethan Schrum. The Instrumental University: Education in Service of the National Agenda after World War II. Cornell University Press. 312pp
- e.Amrit Centre. https://e-amritCentre. https://e-amrit.niti.gov.in/skill-center
- George Town University. (2023). Public-Private Partnership Advanced. https://epe.qatar.geordgetown.edu/executive-education/courses/public-private-partnerships
- Harvard Kennedy School. (2023). Public-Private Partnerships for Infrastructure: Curriculum. https://hks.harvard.edu/educational-programs/executive-education/public-private-partnerships
- Isabel Marques deSa. (2017). How Do You Build Effective Public-Private Partnerships? Management in Practice: Yale Insights. https://insights.som.yale.edu/researchers/isabel-maques-de-sa
- Jack J. Phillips. (2004). Twelve Success Factors for Corporate Universities.https://www.roiinstitute.net/up-content/updates/2018/03
- Kasia Lundy and Haren Ladd. (2022). Institutions are Struggling to Provide Quality Education while Kup with the challenges of Deferred Maintenance. How the Right Public-Private Partnerships in Higher Education Provide Value. https://ey.com/en_us/strategy/public-private-partnerships-in-higher-education
- Kluczny Shanan. (2022). The 9 Elements that Make Top Employee Training Programs So Successful. BIZ.LIBRARY
- Len Musielak and Meighan. (2019). Corporate Universities: Strategic Organizational Learning. https://www.researchgate.net/profile/Len_Musielak
- Marc Rosenberg, Marc My Words: Why Many Corporate Universities Fail, and Some Don't
- MARG. (2023). Corporate Training Programs. https://margonline.com/corporate-training-programs/?utm_source_google&utm
- Marnie Kunz. (2017). List of Corporate Universities. https://theclassroom.com/universities-master-degrees-ecommerce-16633.html
- Mohan Sawhney. (2021). Reimaging Executive Education. Diversity, Inclusion, and Belonging:
- MSDE. Ministry of Skill Development and Entrepreneurship. https://skilldevelopment.gov.in/about-msde
- Nadir Mohammed, Yara Salam, Mikel Ibanez, and Lorenzo Bertoni. (2023). How can Public-Private Partnerships (PPPs) be Successful? The World Bank. https://www.worldbank.org/en/region/mena/brief/how-can-public-private-

partnerships-ppps-be-successful

- Nagoya University. (2010). Academics-Industrial Cooperation. https://en-nagoya-u.ac.jp/research/index.html
- National Institutes of Technical Teachers Training and Research. Bhopal,www.nitttrbpl.ac.in, Chandigarh, www.nitttrchd.ac.in. Chennai, www.nitttrc.ac.in, Kolkata, www.nitttrkol.ac.in
- Patti Williams and Gad Allon. Executive Development Program. The Wharton University of Pennsylvania. https://executiveeducation.wharton.upenn.edu/for-individuals/all-programs/executive-development-program
- Rahul Singh. (2018). 8 Best Practices for the Corporate University 2.0.https://trainingindustry.com/articles/learning-technologies/6-best-practices-for-the-corporate-university-2.0
- Regional Training Centre, Delhi. Indian Audit & Accounts Department.https://cag.gov.in/delhi/rti-delhi-regional-training-institutes
- Robert Rybnicek and Roland Koniggruber. (2018). What makes industry-university collaboration succeed? A Systematic Review of the Literature. Journal of Business Economics. (2019)89:p:221-250
- Shanan Kluczny. (2022). The 9 Elements that Make Top Employee Training Programs So Successful.BIZ LIBRARY
- Stephen B. Friedman. (Editor). (2016). Successful Private-Public-Partnerships from Principles to Practices. Washington DC: Urban Land Institute. 2016
- Steven Conn. Nothing Succeeds like Failure: The Sad History of American Business Schools. Cornell University. 288pp.
- Team Asana. (2022). Collaboration in the workplace:11 ways to boost your team's performance. https://asana.com/resources/collaboration-in-the-workplace
- Team Asana. (2022). Collaboration in the workplace: 11 ways to boost your team's performance. https://asana.com/resources/collaboration-in-the-workplace
- Thanikachalam Vedhathiri. (2023). Effective and Efficient Ways of Executive Development for Corporates in Fast-Developing Countries. QEIOS. https://doi.org/10.32388/QYRGIG
- Thanikachalam Vedhathiri. (2023). A Case Study on Industry-Institute-Cooperation. QEIOS. https://doi.org/10.32388/1WGUIY
- Toyota's Top Training Program. (1981). Technical Training Programs for Toyota Personnel Around the Globe. https://global.toyota/en/detail/7627452
- UNIDO. (2022). South-South and Triangular Industrial Cooperation. https://unido.org/our-focus.cross-cutting-services/south-south-and-triangular-industrial-cooperation
- Vector Solutions. (2020). Easy Steps to Better Industrial Employee Training Programs
- WASP. Industrial Cooperation: Collaboration between industry and academia is of crucial importance in WASP. https://wasp.sweden.org/industrial-cooperation/
- Wilson Malson. (2023). Three Ways to Improve Collaboration among Manufacturing Sites. Online Trade Magazine-Industry 4.0. Advanced Manufacturing and Factory Automation. https://www.manufacturingtommorrow.com/2022/04/three-ways-to-improve-collaboration-among-manufacturing-sites
- World Customs Organization. Regional Training Centers. https://wcoomd.org/en/about/wco-regional_training_centers-asp